

Mineral Industry Surveys

For information, contact:

John F. Papp, Chromium Commodity Specialist
U.S. Geological Survey
989 National Center
Reston, VA 20192
Telephone: (703) 648-4963, Fax: (703) 648-7757
E-mail: jpapp@usgs.gov

Joseph M. Krisanda (Data)
Telephone: (703) 648-7987
Fax: (703) 648-7975

Internet: <http://minerals.usgs.gov/minerals>

CHROMIUM IN JANUARY 2002

On the basis of gross weight, consumption of chromium ferroalloys and metal in January 2002 increased 24% compared with consumption in December 2001, according to the U.S. Geological Survey.

Included in this Mineral Industry Surveys are U.S. salient chromium statistics, U.S. consumption by end use and consumer stocks of chromium ferroalloys and metal at the end of January 2002, and U.S. foreign trade data for selected chromium-containing materials in December 2001.

Update

The National Defense Stockpile Center (DNSC) reported the sale of ferrochromium and ferrochromium silicon. DNSC reported the sale of 6,260 metric tons of low-carbon ferrochromium valued at \$4.9 million, which is \$780 per ton. DNSC also reported the sale of 3,100 tons of ferrochromium silicon valued at \$1.3 million, which is \$420 per ton.

TABLE 1
U.S. SALIENT CHROMIUM STATISTICS 1/

(Metric tons, gross weight)

	2001						2002 January
	Second quarter	Third quarter	November	December	Fourth quarter	January- December 2/	
Production:							
Stainless steel production 3/	453,000	495,000	151,000	126,000	437,000	1,820,000	148,000
Components of U.S. supply:							
Stainless steel scrap receipts	178,000	219,000	53,800	47,300	170,000	710,000	57,600
Stainless steel scrap consumption	273,000	313,000	80,400	66,600	241,000	1,070,000	87,100
Imports for consumption:							
Chromite ore	35,400	80,500	342	10,700	12,800	189,000	NA
Ferrochromium:							
More than 4% carbon	59,400	34,000	12,800	10,700	52,300	236,000	NA
More than 3%, but not more than 4% carbon	--	--	--	--	--	20	NA
More than 0.5%, but not more than 3% carbon	800	794	200	--	200	2,290	NA
Not more than 0.5% carbon	4,990	2,700	1,200	353	3,600	17,200	NA
Ferrochromium silicon	--	2,780	--	6,770	10,300	14,600	NA
Total ferroalloy imports	65,200	40,200	14,200	17,800	66,300	271,000	NA
Chromium metal 4/	2,280	2,150	575	436	1,680	8,190	NA
Stainless steel	193,000	176,000	61,100	58,200	197,000	761,000	NA
Stainless steel scrap	43,600	12,200	2,320	2,570	8,430	98,000	NA
Distribution of U.S. supply:							
Consumption:							
Chromium ferroalloys & metal	80,500 r/	89,400 r/	27,400 r/	22,100 r/	77,000	329,000 r/	27,400
Exports:							
Chromite ore	3,050	27,200	550	168	13,700	61,000	NA
Chromium ferroalloys:							
High-carbon ferrochromium	742	873	210	181	659	8,390	NA
Low-carbon ferrochromium	5,820	683	635	51	1,090	7,880	NA
Ferrochromium silicon	19	43	7	--	19	86	NA
Total ferroalloy exports	6,580	1,600	851	232	1,770	16,400	NA
Chromium metal	402	172	29	62	129	1,040	NA
Stainless steel	64,000	58,400	18,600	15,000	53,200	249,000	NA
Stainless steel scrap	114,000	94,500	18,000	30,800	84,600	438,000	NA
Stocks at end of period:							
Industry:							
Chromium ferroalloys and metal, consumer	XX	XX	26,900	27,400 r/	XX	XX	29,900
Government stockpile:							
Chromite ore	XX	XX	NA	NA	XX	XX	NA
Chromium ferroalloys	XX	XX	NA	NA	XX	XX	NA
Chromium metal	XX	XX	NA	NA	XX	XX	NA

r/ Revised. NA Not available. XX Not applicable. -- Zero.

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ May include revised data.

3/ Data on stainless steel production reported by American Iron and Steel Institute; monthly, quarterly, and year-to-date production of stainless and heat-resisting raw steel.

4/ Includes waste and scrap and other.

TABLE 2
U.S. REPORTED CONSUMPTION AND STOCKS OF CHROMIUM
PRODUCTS IN 2002 1/

(Metric tons, gross weight unless otherwise noted)

	January
Consumption by end use:	
Alloy uses:	
Iron alloys:	
Steel:	
Carbon steel	445
High-strength low-alloy steel	879
Stainless and heat-resisting steel	22,500
Full alloy steel	1,510
Electrical steel	W
Tool steel	539
Unspecified steel	--
Cast irons	W
Superalloys	674
Other alloys 2/	90
Other uses	--
Total	27,400
Total, chromium content	15,400
Consumption by material:	
Low-carbon ferrochromium	1,720
High-carbon ferrochromium	21,600
Ferrochromium silicon	3,790
Chromium metal	270
Chromite ore	W
Chromium-aluminum alloy	48
Other chromium materials	W
Total	27,400
Total, chromium content	15,400
Consumer stocks:	
Low-carbon ferrochromium	1,580
High-carbon ferrochromium	27,000
Ferrochromium silicon	1,160
Chromium metal	140
Chromite ore	8
Chromium-aluminum alloy	21
Other chromium materials	34
Total	29,900
Total, chromium content	17,200

W Withheld to avoid disclosing company proprietary data.

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ Includes structural and hard-facing materials, and aluminum, copper, magnetic, nickel, and other alloys.

TABLE 3
U.S. GOVERNMENT STOCKPILE INVENTORY 1/ OF CHROMIUM MATERIALS 2/

(Metric tons)

Period	Chromite ore			Chromium ferroalloys			Chromium metal	
	Chemical	Metal-lurgical	Refractory	High-carbon ferro-chromium	Low-carbon ferro-chromium	Ferro-chromium silicon	Alumino-thermic	Electrolytic
2001:								
January	203,000	193,000	241,000	615,000	270,000	34,200	2,500	5,050
February	202,000	164,000	238,000	615,000	270,000	34,200	2,500	5,050
March	202,000	164,000	238,000	615,000	270,000	31,600	2,500	5,050
April	200,000	164,000	237,000	603,000	266,000	25,700	2,290	5,050
May	200,000	175,000	237,000	603,000	261,000	22,100	2,290	5,050
June	200,000	175,000	237,000	603,000	261,000	18,800	2,290	5,050
July	198,000	169,000	235,000	603,000	261,000	16,500	2,290	5,050
August	198,000	144,000	219,000	603,000	257,000	14,000	2,270	5,050
September	198,000	144,000	219,000	601,000	248,000	12,900	2,250	5,050
October	NA	NA	NA	NA	NA	NA	NA	NA
November	NA	NA	NA	NA	NA	NA	NA	NA
December	NA	NA	NA	NA	NA	NA	NA	NA
2002:								
January	NA	NA	NA	NA	NA	NA	NA	NA

NA Not available.

1/ Includes specification and non-specification grade materials and materials set aside for disposal but not yet shipped.

2/ Data are rounded to no more than three significant digits.

Source: Defense National Stockpile Center.

TABLE 4
U.S. EXPORTS OF CHROMITE ORE, CHROMIUM FERROALLOYS, AND METAL 1/

Period	Chromite ore		Chromium ferroalloys 2/			Chromium metal 3/	
	Gross weight (metric tons)	Value (thousands)	Gross weight (metric tons)	Chromium content (metric tons)	Value (thousands)	Gross weight (metric tons)	Value (thousands)
2000:							
December	11,800	\$747	230	130	\$230	58	\$541
January-December	138,000	10,200	37,700	24,100	21,200	1,260	13,100
2001:							
January	16,000	1,360	5,830	1,820	4,450	143	1,580
February	548	398	299	179	399	89	823
March	540	239	278	166	307	108	1,010
April	1,190	512	4,490	3,090	2,660	170	1,390
May	686	320	1,480	1,010	1,070	147	1,570
June	1,170	428	613	393	611	85	869
July	471	253	893	573	717	72	999
August	26,500	1,760	300	178	326	26	442
September	205	302	408	246	424	74	571
October	13,000	810	689	437	611	38	570
November	550	244	851	571	750	29	430
December	168	56	232	144	186	62	490
January-December	61,000	6,680	16,400	8,800	12,500	1,040	10,700

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ Includes low-, medium-, and high-carbon ferrochromium, and ferrochromium silicon.

3/ Includes wrought and unwrought and waste and scrap.

Source: U.S. Census Bureau.

TABLE 5
U.S. IMPORTS FOR CONSUMPTION OF CHROMITE ORE, FERROCHROMIUM, AND CHROMIUM METAL 1/

(Metric tons)

	2000	2001			
	January- December 2/	October	November	December	January- December 2/
Chromite ore:					
Not more than 40% chromic oxide:					
Gross weight	4,520	158	60	40	1,600
Chromic oxide content	1,650	59	21	14	575
More than 40% but less than 46% chromic oxide:					
Gross weight	33,100	--	--	27	3,100
Chromic oxide content	15,100	--	--	12	1,430
46% or more chromic oxide:					
Gross weight	230,000	1,600	282	10,600	184,000
Chromic oxide content	109,000	752	144	5,580	88,600
Total, all grades:					
Gross weight	268,000	1,760	342	10,700	189,000
Chromic oxide content	126,000	811	165	5,610	90,600
Ferrochromium:					
Low-carbon: 3/					
Not more than 0.5%:					
Gross weight	50,300	2,050	1,200	353	17,200
Chromium content	32,700	1,430	839	246	11,800
More than 0.5%, but not more than 3%:					
Gross weight	9,150	--	200	--	2,290
Chromium content	5,930	--	123	--	1,440
Total, low-carbon:					
Gross weight	59,500	2,050	1,400	353	19,500
Chromium content	38,700	1,430	962	246	13,200
Medium-carbon: 4/					
Gross weight	--	--	--	--	20
Chromium content	--	--	--	--	13
High-carbon: 5/					
Gross weight	517,000	28,700	12,800	10,700	236,000
Chromium content	298,000	17,000	6,920	6,610	137,000
Total, all grades:					
Gross weight	577,000	30,800	14,200	11,000	256,000
Chromium content	337,000	18,400	7,880	6,860	150,000
Chromium metal:					
Other than waste and scrap	9,900	671	575	434	8,150
Waste and scrap	41	1	--	2	43
Total, all grades	9,940	672	575	436	8,190

-- Zero.

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ May include revised data.

3/ Ferrochromium containing not more than 3% carbon.

4/ Ferrochromium containing more than 3%, but not more than 4% carbon.

5/ Ferrochromium containing more than 4% carbon.

Source: U.S. Census Bureau.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF CHROMITE ORE IN 2001, BY GRADE AND BY COUNTRY 1/

Grade and country	December			January-December 2/		
	Gross weight (metric tons)	Cr ₂ O ₃ (metric tons)	Value 3/ (thousands)	Gross weight (metric tons)	Cr ₂ O ₃ (metric tons)	Value 3/ (thousands)
Not more than 40% chromic oxide, Canada	40	14	\$16	1,600	575	\$751
More than 40% but less than 46% chromic oxide, South Africa	27	12	4	3,100	1,430	204
46% or more chromic oxide:						
Canada	--	--	--	87	45	52
Italy	20	10	4	20	10	4
South Africa	10,600	5,570	1,250	184,000	88,400	10,500
Turkey	--	--	--	306	168	70
Total	10,600	5,580	1,260	184,000	88,600	10,600
All grades:						
Canada	40	14	16	1,680	620	803
Italy	20	10	4	20	10	4
South Africa	10,600	5,590	1,260	187,000	89,800	10,700
Turkey	--	--	--	306	168	70
Total	10,700	5,610	1,270	189,000	90,600	11,600

-- Zero.

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ May include revised data.

3/ Customs import value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the merchandise to the United States.

Source: U.S. Census Bureau.

TABLE 7
U.S. IMPORTS FOR CONSUMPTION OF FERROCHROMIUM IN 2001, BY GRADE AND BY COUNTRY 1/

Grade and country	December			January-December 2/		
	Gross weight (metric tons)	Chromium content (metric tons)	Value 3/ (thousands)	Gross weight (metric tons)	Chromium content (metric tons)	Value 3/ (thousands)
High-carbon ferrochromium: 4/						
China	--	--	--	103	68	\$78
Japan	--	--	--	20	14	42
Kazakhstan	6,740	4,600	\$2,020	61,400	42,100	21,100
Russia	--	--	--	20	14	12
South Africa	3,900	2,000	830	138,000	72,100	42,900
Sweden	--	--	--	38	28	78
United Kingdom	20	14	20	20	14	20
Zimbabwe	--	--	--	37,200	22,400	14,900
Total	10,700	6,610	2,870	236,000	137,000	79,200
Medium-carbon ferrochromium, 5/ Russia	--	--	--	20	13	20
Low-carbon ferrochromium: 6/						
More than 0.5%, but not more than 3% carbon:						
Kazakhstan	--	--	--	500	345	275
South Africa	--	--	--	1,720	1,040	1,000
Sweden	--	--	--	76	55	152
Total	--	--	--	2,290	1,440	1,430
Not more than 0.5% carbon:						
Brazil	--	--	--	20	12	45
Canada	--	--	--	4	3	13
China	--	--	--	20	14	25
France	--	--	--	3	2	4
Germany	130	91	266	7,240	5,090	14,200
Japan	162	110	343	2,520	1,600	5,350
Mexico	--	--	--	19	12	40
Russia	61	45	98	6,440	4,450	5,100
South Africa	--	--	--	933	582	919
Sweden	--	--	--	38	28	72
Total	353	246	707	17,200	11,800	25,700
All grades:						
Brazil	--	--	--	20	12	45
Canada	--	--	--	4	3	13
China	--	--	--	123	81	103
France	--	--	--	3	2	4
Germany	130	91	266	7,240	5,090	14,200
Japan	162	110	343	2,540	1,620	5,390
Kazakhstan	6,740	4,600	2,020	61,900	42,500	21,400
Mexico	--	--	--	19	12	40
Russia	61	45	98	6,480	4,480	5,140
South Africa	3,900	2,000	830	140,000	73,700	44,900
Sweden	--	--	--	152	110	302
United Kingdom	20	14	20	20	14	20
Zimbabwe	--	--	--	37,200	22,400	14,900
Total	11,000	6,860	3,580	256,000	150,000	106,000

-- Zero.

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ May include revised data.

3/ Customs import value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the merchandise to the United States.

4/ Ferrochromium containing more than 4% carbon.

5/ Ferrochromium containing more than 3%, but not more than 4% carbon.

6/ Ferrochromium containing not more than 3% carbon.

Source: U.S. Census Bureau.

TABLE 8
U.S. IMPORTS FOR CONSUMPTION OF CHROMIUM METAL IN 2001,
BY GRADE AND BY COUNTRY 1/

Grade and country	December		January-December 2/	
	Gross weight (metric tons)	Value 3/ (thousands)	Gross weight (metric tons)	Value 3/ (thousands)
Waste and scrap:				
China	--	--	34	\$114
Germany	--	--	1	5
Japan	1	\$5	4	22
Korea, Republic of	1	4	4	22
Total	2	8	43	163
Other than waste and scrap:				
Austria	--	--	(4/)	54
Brazil	--	--	1	35
Canada	--	--	6	26
China	119	450	1,020	4,160
France	92	735	2,330	18,300
Germany	(4/)	35	76	901
Italy	--	--	(4/)	7
Japan	(4/)	7	15	480
Kazakhstan	57	234	839	3,510
Netherlands	--	--	19	96
Pakistan	--	--	95	390
Russia	138	704	1,740	7,860
Switzerland	--	--	1	178
Taiwan	1	4	2	56
United Kingdom	27	250	2,000	13,900
Total	434	2,420	8,150	50,000
All grades:				
Austria	--	--	(4/)	54
Brazil	--	--	1	35
Canada	--	--	6	26
China	119	450	1,050	4,280
France	92	735	2,330	18,300
Germany	(4/)	35	77	906
Italy	--	--	(4/)	7
Japan	1	12	19	503
Kazakhstan	57	234	839	3,510
Korea, Republic of	1	4	4	22
Netherlands	--	--	19	96
Pakistan	--	--	95	390
Russia	138	704	1,740	7,860
Switzerland	--	--	1	178
Taiwan	1	4	2	56
United Kingdom	27	250	2,000	13,900
Total	436	2,430	8,190	50,100

-- Zero.

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ May include revised data.

3/ Customs import value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the merchandise into the United States.

4/ Less than 1/2 unit.

Source: U.S. Census Bureau.

TABLE 9
U.S. TRADE OF STAINLESS STEEL, BY PRODUCT, IN 2001 1/

Stainless steel product	December		January-December	
	Gross weight (metric tons)	Value 2/ (thousands)	Gross weight (metric tons)	Value 2/ (thousands)
Exports:				
Ingot	472	\$5,010	7,180	\$36,900
Flat-rolled (width > 600 mm)	4,830	14,600	84,500	201,000
Flat-rolled (width < 600 mm)	5,820	12,500	91,800	202,000
Bars and rods in irregular coils	37	306	1,160	6,810
Other bars and rods	1,350	7,400	18,700	94,300
Wire	813	4,240	11,100	70,900
Tubes, pipes, hollow profiles	1,710	7,550	35,000	140,000
Total	15,000	51,700	249,000	752,000
Stainless steel scrap	30,800	19,900	438,000	270,000
Grand total	45,900	71,600	688,000	1,020,000
Imports:				
Ingot	18,700	17,100	279,000	299,000
Flat-rolled (width > 600 mm)	18,000	24,900	214,000	336,000
Flat-rolled (width < 600 mm)	2,600	7,970	30,100	99,800
Bars and rods in irregular coils	5,210	8,410	56,500	105,000
Other bars and rods	4,940	12,200	86,300	218,000
Wire	2,360	7,430	28,200	98,000
Tubes, pipes, hollow profiles	6,460	25,700	66,300	276,000
Total	58,200	104,000	761,000	1,430,000
Stainless steel scrap	2,570	1,980	98,000	29,700
Grand total	60,800	106,000	859,000	1,460,000

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ Export value is free alongside ship (f.a.s.). Import value is Customs import value, which generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the merchandise to the United States.

Source: U.S. Census Bureau.